

WAVEGUIDE GRATING ARRANGEMENT USING A SEGMENTED REFLECTOR

Abstract

5 An optical imaging arrangement includes a wavelength router having (1)
N waveguides connected to different locations of the input curved boundary of the
router, (2) a grating that forms multiple paths through the router and which
transforms a particular wavelength applied to one of the N waveguides into N
interleaved sets of equally spaced output images corresponding to the different
10 orders of the grating (3) an output curve illuminated by the various images and (4)
N interleaved sets of reflective elements placed along the output curve with
properly chosen periodicity, such that all significant orders of each set of images
are reflected back through the arrangement, so as to effectively produce a single
15 input reflection in only one of the N waveguides of the arrangement, and the
particular waveguide is determined by the phase shifts produced by the sets of
reflective elements.

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